

What is Claimed is:

1. A composition comprising cross-linked collagen and glycosaminoglycan, said composition retaining characteristics to function as a matrix or scaffold following terminal sterilization.
2. The composition of claim 1 further comprising a silicone layer applied to the collagen and glycosaminoglycan prior to cross-linking.
3. A terminally sterilized matrix or scaffold comprising the composition of claim 1.
4. A terminally sterilized matrix or scaffold comprising the composition of claim 2.
5. A method for producing the composition of claim 1 comprising cross-linking the collagen and glycosaminoglycan at a density which stabilizes the composition toward electron beam radiation while retaining characteristics of the composition to function as a matrix or scaffold.
6. The method of claim 5 wherein cross-linking of the composition is performed with glutaraldehyde at a concentration greater than 0.25%.
7. The method of claim 5 wherein the composition is subjected to two or more cross-linking steps.
8. The method of claim 7 wherein the two or more cross-linking steps are performed with glutaraldehyde at 0.25%.

9. A method for producing a terminally sterilized matrix or scaffold comprising:

- (a) producing a composition of claim 1;
- (b) sealing the composition in a package; and

5 (c) exposing the composition in the sealed package to electron beam radiation.

10. The method of claim 9 wherein the composition of step (a) is produced by cross-linking the collagen and glycosaminoglycan at a density which stabilizes the 10 composition toward electron beam radiation while retaining characteristics of the composition to function as a matrix or scaffold.

11. A terminally sterilized matrix or scaffold 15 produced in accordance with the method of claim 9.

12. A method for regenerating dermal or sub-dermal tissue in a subject comprising applying to or implanting within the subject the terminally sterilized matrix or scaffold of claim 3 at or near an excision site of dermal 20 or subdermal tissue or a site where augmentation of dermal or subdermal tissue is required.